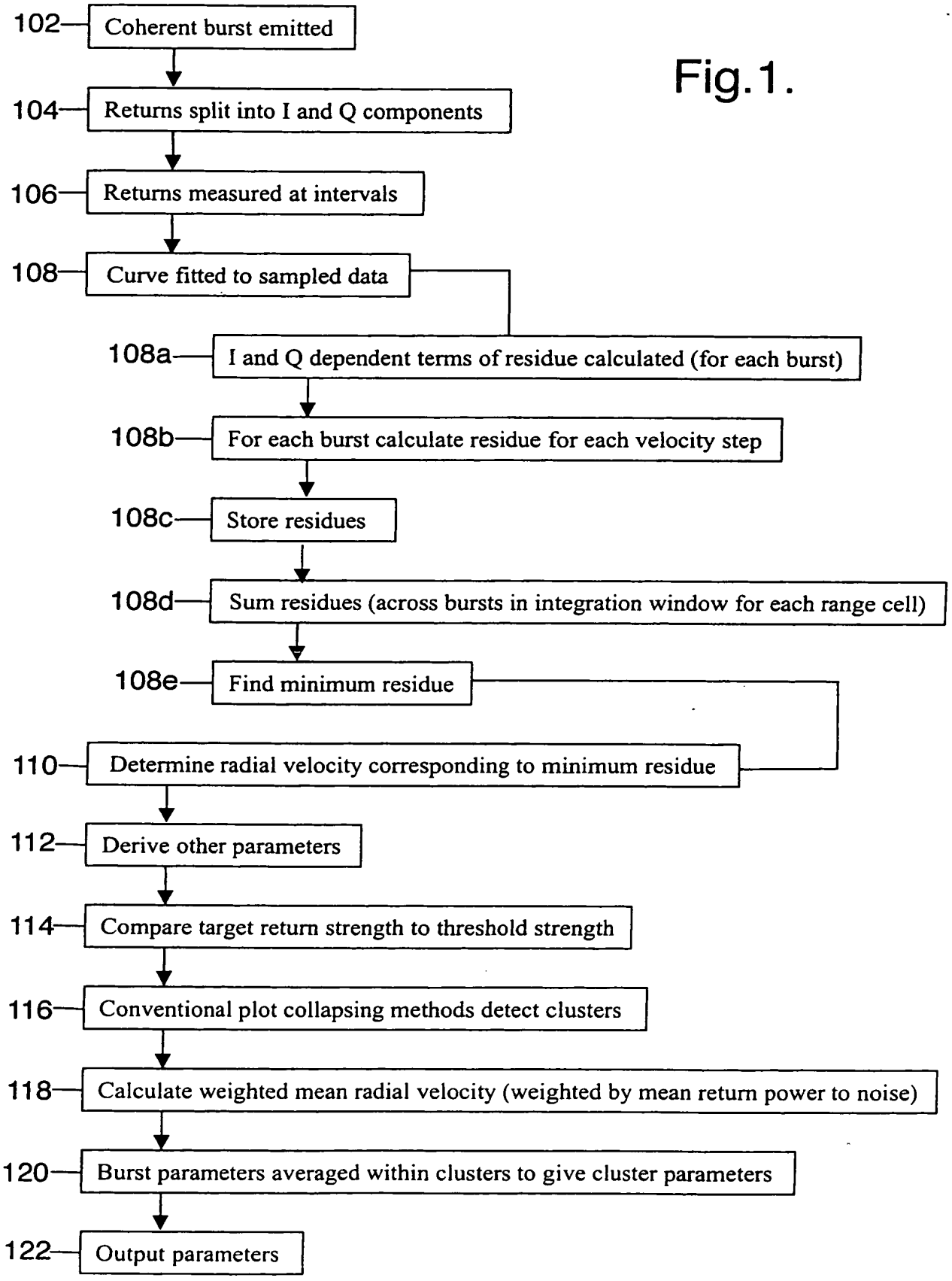

102
Coherent burst emitted
104
Returns split into I and Q components
106
Returns measured at intervals
108
Curve fitted to sampled data
108a
I and Q dependent terms of residue calculated (for each burst)
108b
For each burst calculate residue for each velocity step
108c
Store residues
108d
Sum residues (across bursts in integration window for each range cell)
108e
Find minimum residue
110
Determine radial velocity corresponding to minimum residue
112
Derive other parameters
114
Compare target return strength to threshold strength
116
Conventional plot collapsing methods detect clusters
118
Calculate weighted mean radial velocity (weighted by mean return power to noise)
120
Burst parameters averaged within clusters to give cluster parameters
122
Output parameters

Fig.1.

Fig.2.

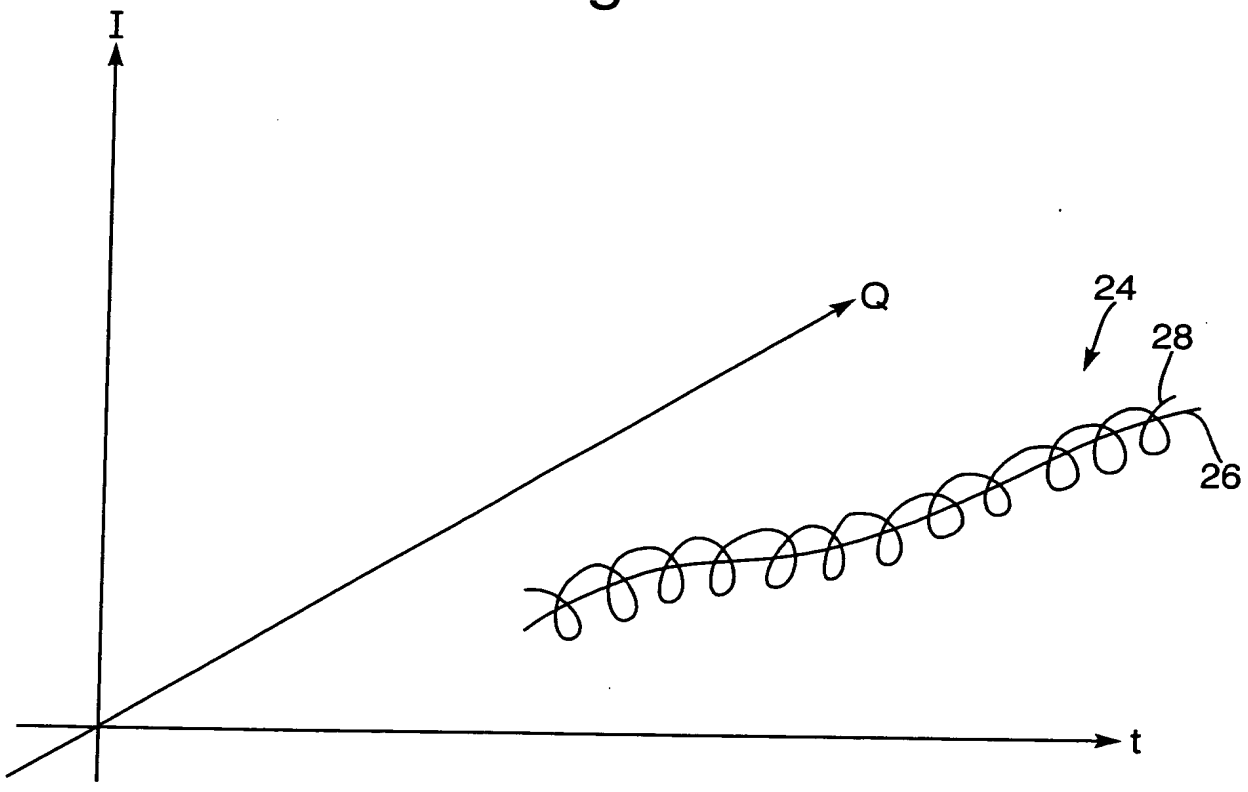


Fig.3.

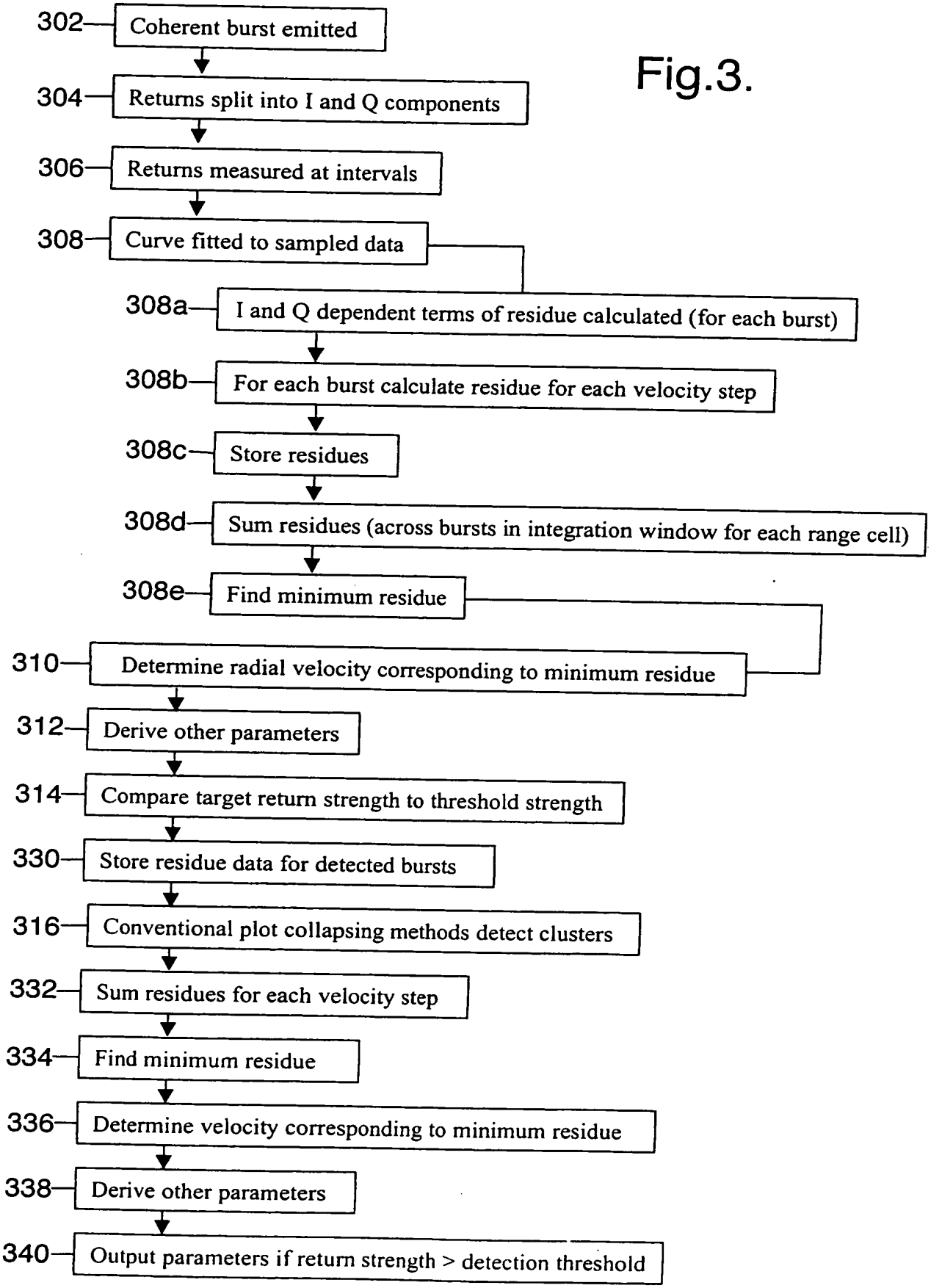

302
Coherent burst emitted
304
Returns split into I and Q components
306
Returns measured at intervals
308
Curve fitted to sampled data
308a
I and Q dependent terms of residue calculated (for each burst)
308b
For each burst calculate residue for each velocity step
308c
Store residues
308d
Sum residues (across bursts in integration window for each range cell)
308e
Find minimum residue
310
Determine radial velocity corresponding to minimum residue
312
Derive other parameters
314
Compare target return strength to threshold strength
330
Store residue data for detected bursts
316
Conventional plot collapsing methods detect clusters
332
Sum residues for each velocity step
334
Find minimum residue
336
Determine velocity corresponding to minimum residue
338
Derive other parameters
340
Output parameters if return strength > detection threshold

Fig.4.

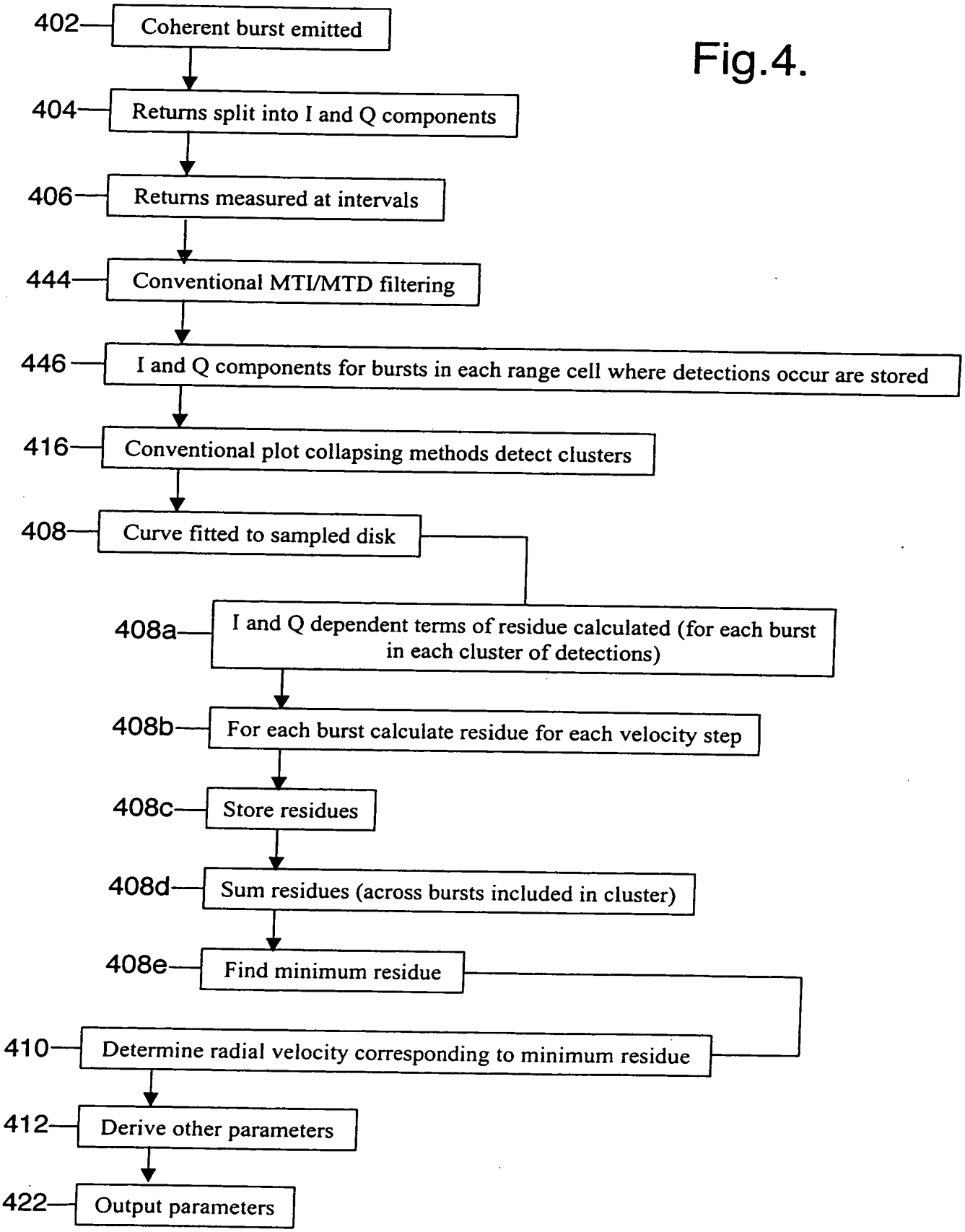

402
Coherent burst emitted
404
Returns split into I and Q components
406
Returns measured at intervals
444
Conventional MTI/MTD filtering
446
I and Q components for bursts in each range cell where detections occur are stored
416
Conventional plot collapsing methods detect clusters
408
Curve fitted to sampled disk
408a
I and Q dependent terms of residue calculated (for each burst in each cluster of detections)
408b
For each burst calculate residue for each velocity step
408c
Store residues
408d
Sum residues (across bursts included in cluster)
408e
Find minimum residue
410
Determine radial velocity corresponding to minimum residue
412
Derive other parameters
422
Output parameters

Fig.5.

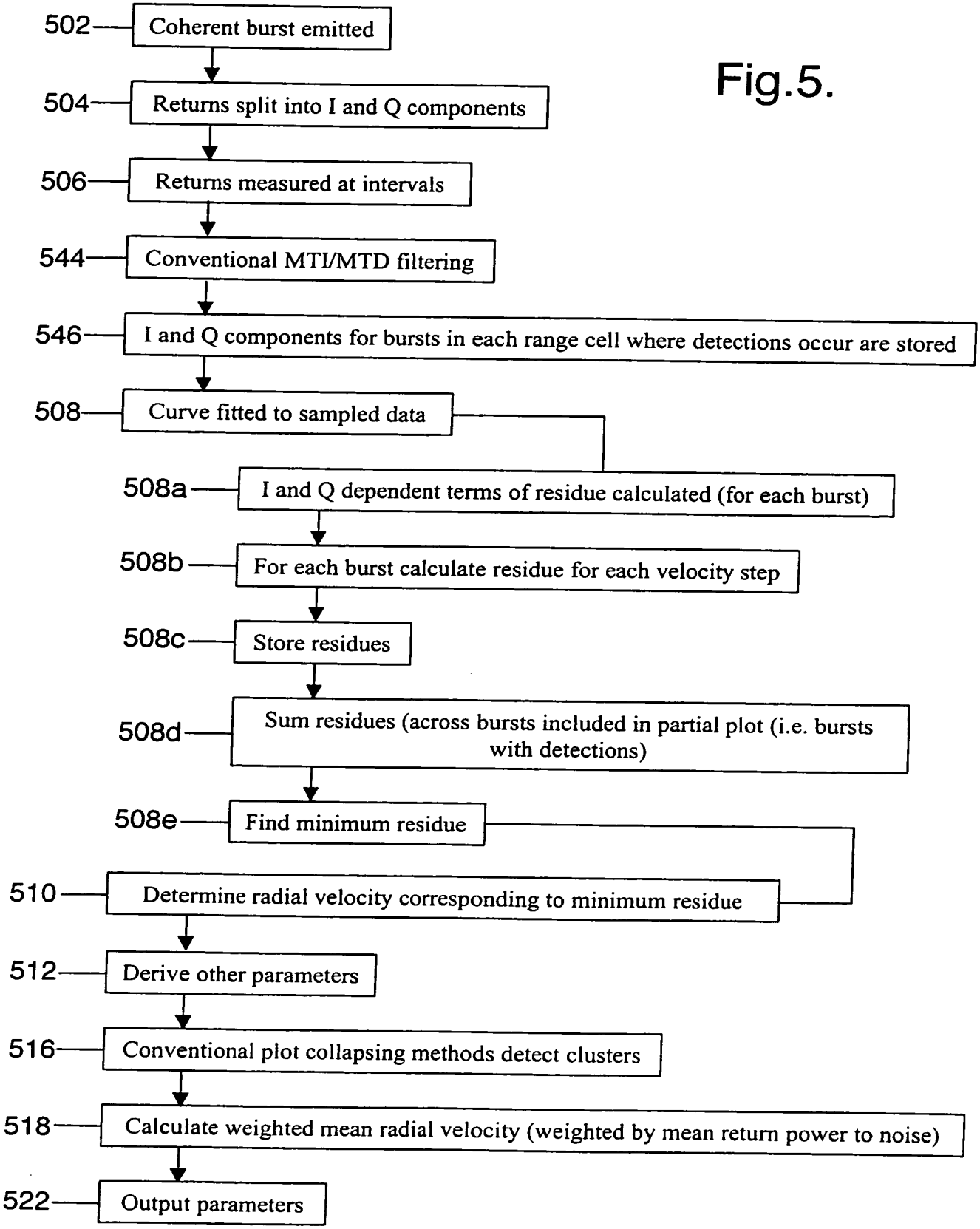
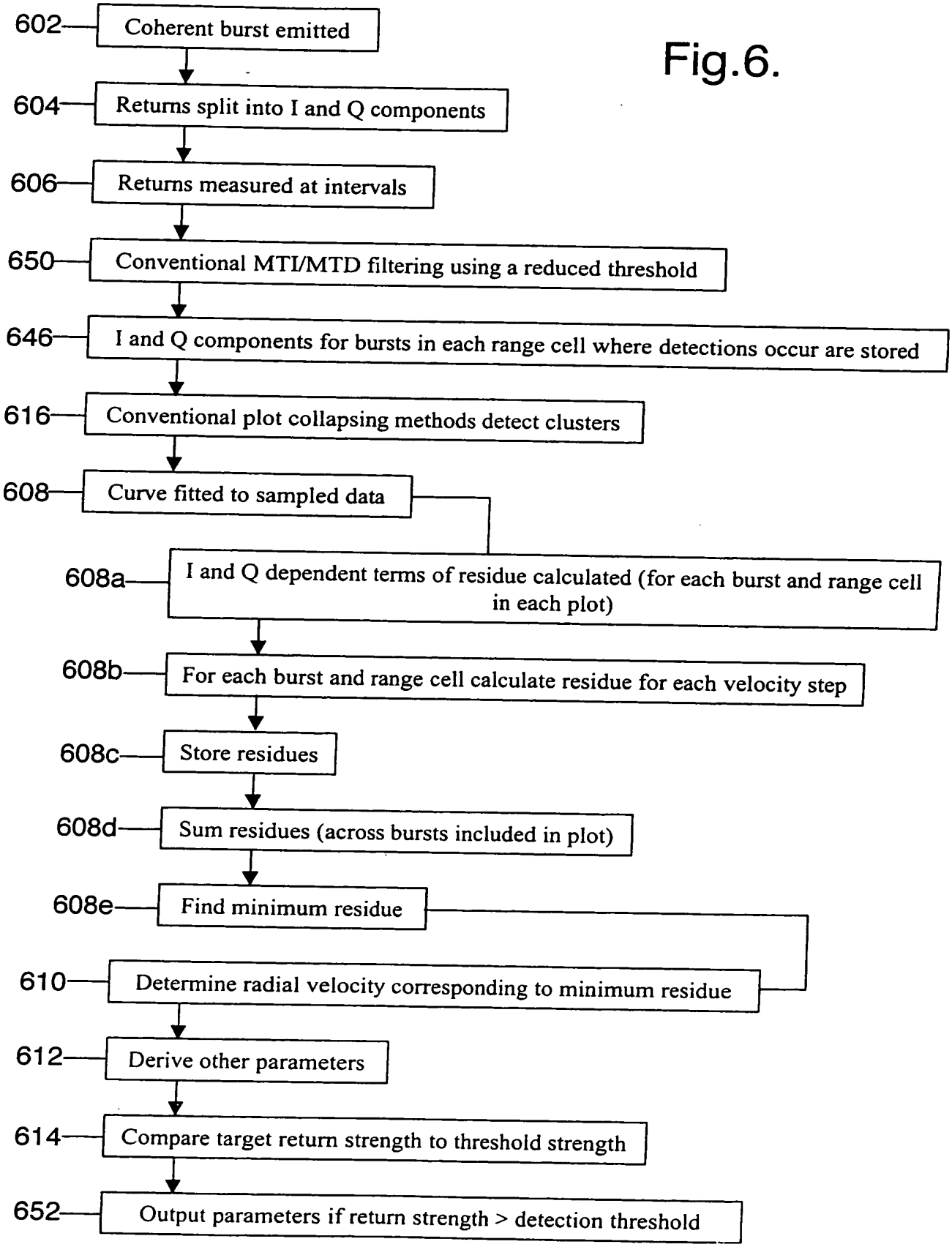

502
Coherent burst emitted
504
Returns split into I and Q components
506
Returns measured at intervals
544
Conventional MTI/MTD filtering
546
I and Q components for bursts in each range cell where detections occur are stored
508
Curve fitted to sampled data
508a
I and Q dependent terms of residue calculated (for each burst)
508b
For each burst calculate residue for each velocity step
508c
Store residues
508d
Sum residues (across bursts included in partial plot (i.e. bursts with detections)
508e
Find minimum residue
510
Determine radial velocity corresponding to minimum residue
512
Derive other parameters
516
Conventional plot collapsing methods detect clusters
518
Calculate weighted mean radial velocity (weighted by mean return power to noise)
522
Output parameters

Fig.6.


602
Coherent burst emitted
604
Returns split into I and Q components
606
Returns measured at intervals
650
Conventional MTI/MTD filtering using a reduced threshold
646
I and Q components for bursts in each range cell where detections occur are stored
616
Conventional plot collapsing methods detect clusters
608
Curve fitted to sampled data
608a
I and Q dependent terms of residue calculated (for each burst and range cell in each plot)
608b
For each burst and range cell calculate residue for each velocity step
608c
Store residues
608d
Sum residues (across bursts included in plot)
608e
Find minimum residue
610
Determine radial velocity corresponding to minimum residue
612
Derive other parameters
614
Compare target return strength to threshold strength
652
Output parameters if return strength > detection threshold

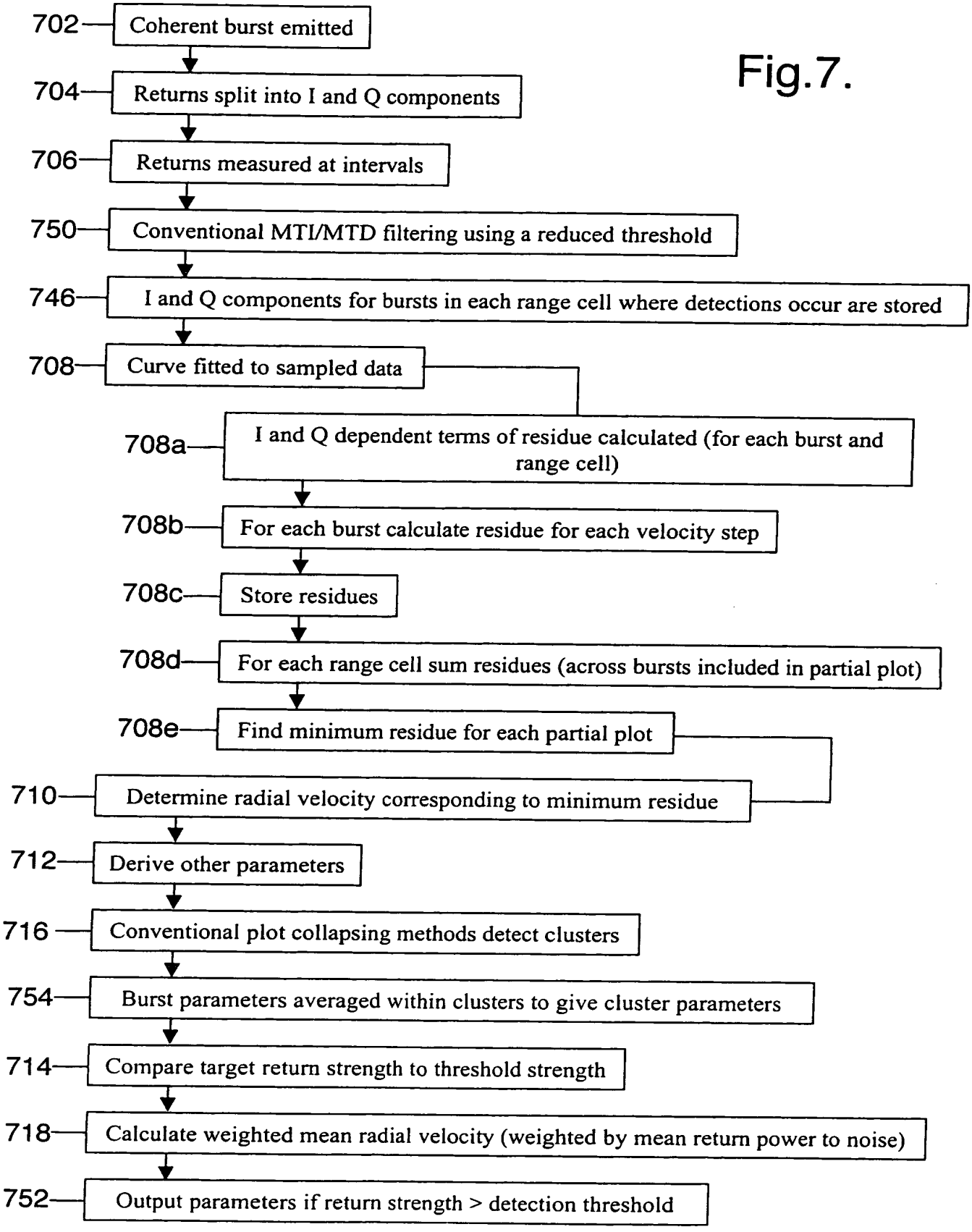

702
Coherent burst emitted
704
Returns split into I and Q components
706
Returns measured at intervals
750
Conventional MTI/MTD filtering using a reduced threshold
746
I and Q components for bursts in each range cell where detections occur are stored
708
Curve fitted to sampled data
708a
I and Q dependent terms of residue calculated (for each burst and range cell)
708b
For each burst calculate residue for each velocity step
708c
Store residues
708d
For each range cell sum residues (across bursts included in partial plot)
708e
Find minimum residue for each partial plot
710
Determine radial velocity corresponding to minimum residue
712
Derive other parameters
716
Conventional plot collapsing methods detect clusters
754
Burst parameters averaged within clusters to give cluster parameters
714
Compare target return strength to threshold strength
718
Calculate weighted mean radial velocity (weighted by mean return power to noise)
752
Output parameters if return strength > detection threshold

Fig.7.

Fig.8.

Range ambiguity

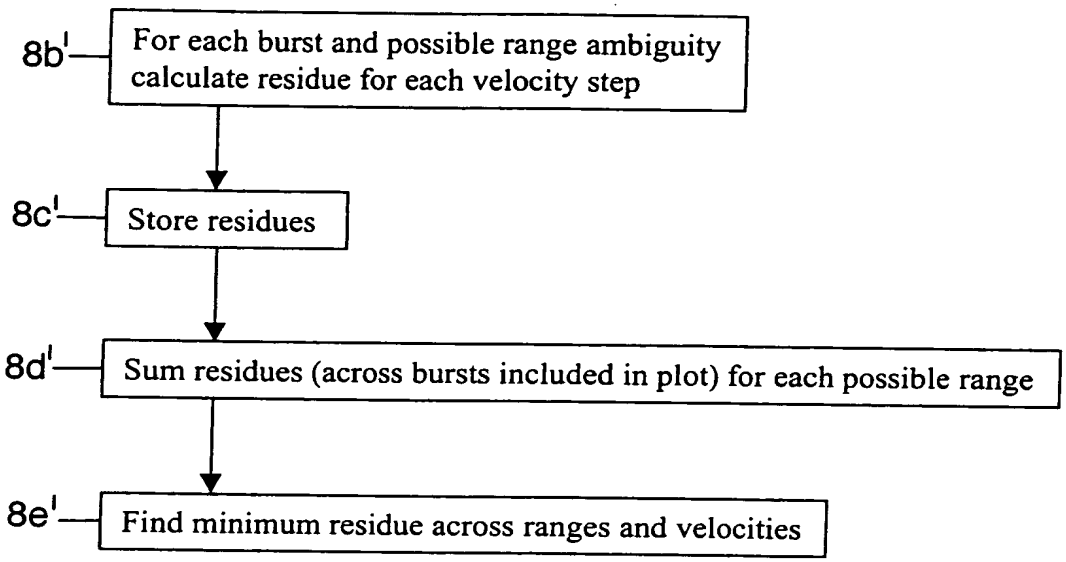
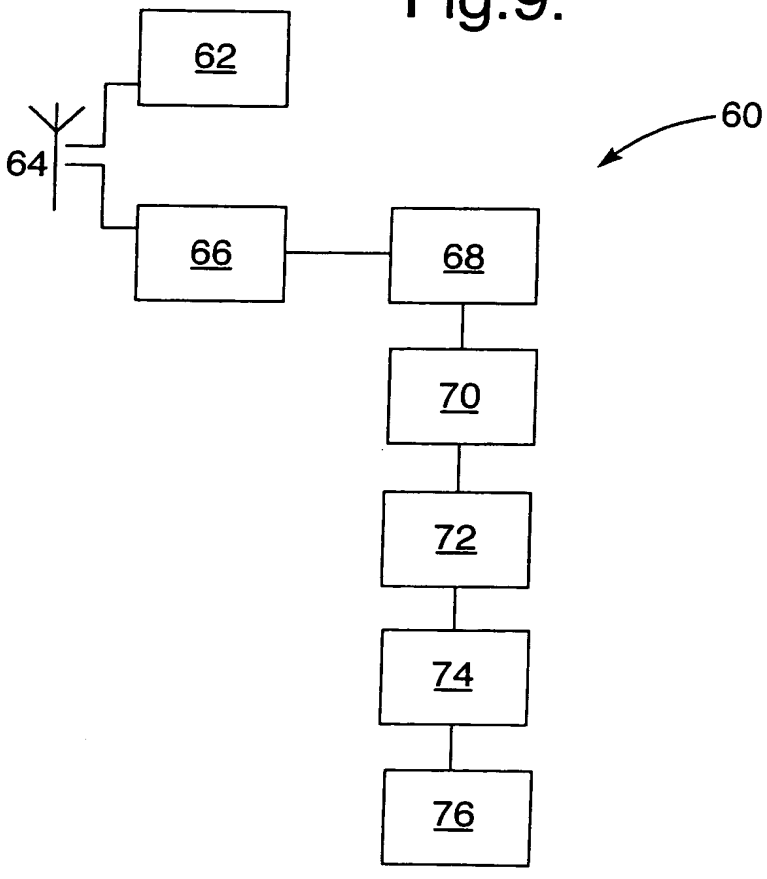



Fig.9.